



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,322	04/19/2004	Michiya Inoue	392.1893	1067
21171	7590	10/02/2007		
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER WANG, JUE S	
			ART UNIT 2193	PAPER NUMBER
			MAIL DATE 10/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/826,322

Applicant(s)

INOUE ET AL.

Examiner

Jue S. Wang

Art Unit

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>April 19, 2004, Nov 16, 2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-6 have been examined.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The following claim language is not clear and indefinite:

- i. As per claim 3, line 3, claim 4, line 2, the term “renaming-range” is used. This limitation is not clearly understood because it is not clear what “renaming-range” refers to (i.e., the range of acceptable names that can be used in place of the duplicated name, or the range in the program statements where renaming should occur?).

Appropriate corrections are required.

Any claim not specifically addressed, above, is being rejected as incorporating the deficiencies of a claim upon which it depends.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zifferer et al. (US 5,267,145, hereinafter Zifferer), in view of Chase et al. (US 6,149,318, hereinafter Chase).

6. As per claim 1, Zifferer teaches the invention as claimed including a sequence program editing apparatus comprising (see column 2, line 61 – column 3, line 27, column 5, lines 6-20),
program storage means for storing a sequence program (see column 5, lines 6-20);
displaying means for displaying a signal name and locations of the signal name in the sequence program (see Figs 8, 12, column 2, line 61 – column 3, line 27, column 8, lines 6-59);
signal-name rewriting means for rewriting signal names in the sequence program (see Figs 17-19, column 9, line 15 – column 10, line 26).

Zifferer does not teach duplication detection means for detecting duplication of the same signal name assigned for different coils in the sequence program, and displaying duplicated signal names detected by the duplication detecting means.

Chase teaches duplication detection means for detecting duplicate definitions of a single function or variable and displaying means to display the duplicate definition and their locations (Fig 5F, column 1, lines 57-59, column 14, line 37 – column 16, line 48).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Zifferer such that the sequence program editing apparatus includes a duplication detection means for detecting duplication of the same signal name assigned for different coils in the sequence program as taught by Chase because assigning the same signal name to different coils in a sequence program is an error that must be corrected since a signal name referring to more than one coil will result in a conflict in the definitions. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention that the search and replace function of Zifferer can be adapted to rewrite the duplicated names that are now displayed in an apparatus of Zifferer modified by the duplication detection means of Chase because the duplication error must be corrected before the sequence program can be valid and the search and replace function supplies an fast way to rewrite the duplicated signal names detected by the detection means.

7. As per claim 2, Zifferer as modified further teaches selection means allowing selection of signal names to be rewritten in the duplicated signal names displayed in said displayed means (see column 9, lines 42-48 of Zifferer; EN: it would have been obvious to one of ordinary skill in the art that the list of currently defined symbols that the selection means apply to could have been modified to include the duplicated signal names as the duplication means would report all the duplicated signal names).

Art Unit: 2193

8. As per claim 3, Zifferer as modified further teaches the signal-name rewriting means includes means for rename contacts for the coils to which the same signal name is assigned (see Fig 3, column 2, line 61 – column 3, line 4, column 9, line 15 – column 10, line 26; EN: it is well known that ladder logic program contains contacts which are named by symbols), and renaming-range setting means for setting a range of renaming the contacts in the sequence program (see column 7, line 61 – column 8, line 4; EN: the rename range is limited by limiting the search range as the signal name is only replaced for symbols found in the search limited by the search range).

9. As per claim 4, Zifferer as modified further teaches the renaming-range setting means allows to set the renaming range for a divided unit of a main program and subprograms of the sequence program (see column 7, line 61 – column 8, line 4, column 9, lines 1-14).

10. As per claim 6, Zifferer as modified further teaches communication means for communication with a programmable controller, wherein the duplication means detects duplication of the same signal name assigned for different coils in a sequence program stored in the programmable controller (see column 3, lines 29-37, column 5, lines 6-20).

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zifferer et al. (US 5,267,145, hereinafter Zifferer), in view of Chase et al. (US 6,149,318, hereinafter Chase), as applied to claim 1 above, further in view of Tyma (US 6,102,966).

12. As per claim 5, Zifferer and Chase do not teach a search-range setting means for a search range of signal names assignable to the different coils, extracting means for extracting signal names assignable to the different coils within the set search range, and rewriting means for rewriting the duplicated signal names to the extracted signal names.

Tyma teaches a method for renaming identifiers in a Java program (see abstract, line 1), with a search-range setting means for a search range of names assignable to the different Java classes, fields, and methods (i.e., the ordered list of new names, see abstract, line 10, column 10, lines 1-9), extracting means for extracting names assignable to the different classes, fields, and methods within the set search range (see abstract, lines 8-12, column 10, lines 7-12) and rewriting means for rewriting the names to the extracted names (see column 10, lines 55-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Zifferer as Chase with search-range setting means for a search range of signal names assignable to the different coils, extracting means for extracting signal names assignable to the different coils within the set search range, and rewriting means for rewriting the duplicated signal names to the extracted signal names as taught by Tyma because it allows new names to be assigned in a systematic fashion without requiring the programmer to enter the new names (see abstract, lines 8-12 of Tyma).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2193

- Mattes et al. (US 4,591,967) is cited to teach a distributed drum emulating programmable controller system, including developing programs for the programmable controller system where duplicate name assignments are not allowed.
- Janigian (US 5,303,149) is cited to teach a system for eliminating duplicate entries from a mailing list.
- Tanaka et al. (US 5,331,540) is cited to teach a symbol definition system for a programmable machine controller.
- Yamane et al. (US 5,717,588) is cited to teach a programming system for sequence programs where labels are assigned to devices, contacts, and actions, and the same label cannot bear different contents or meaning.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jue S. Wang whose telephone number is (571) 270-1655. The examiner can normally be reached on M-Th 7:30 am - 5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2193

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jue Wang
Examiner
Art Unit 2193


MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
EBC CENTER 2100